

Raf-1 (C-20): sc-227

BACKGROUND

Several serine/threonine protein kinases have been implicated as intermediates in signal transduction pathways. These include ERK/MAP kinases, ribosomal S6 kinase (Rsk) and Raf-1. Raf-1 is a cytoplasmic protein with intrinsic serine/threonine activity. It is broadly expressed in nearly all cell lines tested to date and is the cellular homolog of v-Raf, the product of the transforming gene of the 3,611 strain of murine sarcoma virus. The unregulated kinase activity of the v-Raf protein has been associated with transformation and mitogenesis while the activity of Raf-1 is normally suppressed by a regulatory N-terminal domain. Raf-1 is activated in response to activation of a variety of tyrosine kinase receptors as well as in response to pp60v-Src expression. There is accumulating evidence that Ras p21 may play a role in activation of Raf-1 and may play the role of the messenger from membrane tyrosine kinases to Raf-1.

CHROMOSOMAL LOCATION

Genetic locus: RAF1 (human) mapping to 3p25.2; Raf1 (mouse) mapping to 6 E3.

SOURCE

Raf-1 (C-20) is available as either rabbit (sc-227) or goat (sc-227-G) affinity purified polyclonal antibody raised against a peptide mapping near the C-terminus of Raf-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-227 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose (sc-227 AC) conjugate for immunoprecipitation, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

Raf-1 (C-20) is recommended for detection of Raf-1 p74 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Raf-1 (C-20) is also recommended for detection of Raf-1 p74 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Raf-1 siRNA (h): sc-29462, Raf-1 siRNA (m): sc-29463, Raf-1 shRNA Plasmid (h): sc-29462-SH, Raf-1 shRNA Plasmid (m): sc-29463-SH, Raf-1 shRNA (h) Lentiviral Particles: sc-29462-V and Raf-1 shRNA (m) Lentiviral Particles: sc-29463-V.

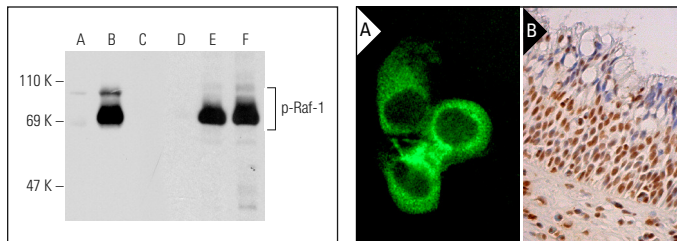
Molecular Weight of Raf-1: 80 kDa.

Positive Controls: Raf-1 (m): 293T Lysate: sc-122942, Raf-1 (h2): 293T Lysate: sc-113164 or HeLa whole cell lysate: sc-2200.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Western blot analysis of Raf-1 phosphorylation in non-transfected: sc-117752 (A,D), untreated mouse Raf-1 transfected: sc-122942 (B,E) and lambda protein phosphatase (sc-200312A) treated mouse Raf-1 transfected: sc-122942 (C,F) 293T whole cell lysates. Antibodies tested include p-Raf-1 (H-8): sc-271928 (A,B,C) and Raf-1 (C-20): sc-227 (D,E,F).

Raf-1 (C-20): sc-227. Immunofluorescence staining of methanol-fixed 3611-RF cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear staining of respiratory epithelial cells (B).

SELECT PRODUCT CITATIONS

- Freed, E., et al. 1994. Binding of 14-3-3 proteins to the protein kinase Raf and effects on its activation. *Science* 265: 1713-1716.
- Heidorn, S.J., et al. 2010. Kinase-dead BRAF and oncogenic RAS cooperate to drive tumor progression through CRAF. *Cell* 140: 209-221.
- Shi, Z., et al. 2010. The neuroprotective effect of batch-2, an aqueous extract from Cat's Claw (*Uncaria tomentosa*) on 6-OHDA-induced SH-SY5Y cell damage. *Prog. Biochem. Biophys.* 37: 769-778.
- Ezzoukhry, Z., et al. 2012. EGFR activation is a potential determinant of primary resistance of hepatocellular carcinoma cells to sorafenib. *Int. J. Cancer* 131: 2961-2969.
- Zhou, H., et al. 2012. Ginkgolide B inhibits renal cyst development in *in vitro* and *in vivo* cyst models. *Am. J. Physiol. Renal Physiol.* 302: F1234-F1242.
- Duncan, J.S., et al. 2012. Dynamic reprogramming of the kinome in response to targeted MEK inhibition in triple-negative breast cancer. *Cell* 149: 307-321.
- Jang, E.R., et al. 2015. Spatial control of Shoc2 scaffold-mediated ERK1/2 signaling requires remodeling activity of the ATPase PSMC5. *J. Cell Sci.* 128: 4428-4441.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Raf-1 (E-10): sc-7267** or **Raf-1 (H-8): sc-376142**, our highly recommended monoclonal alternatives to Raf-1 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Raf-1 (E-10): sc-7267**.